IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Inventors: Vinh Thanh Vu

Serial No.: 10/642868

Filing Date: 8/18/2003

Art Unit: 2837

Examiner: Edgardo San Martin

Docket No.: 125-001us

Title: Vibration Control Platform

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

APPEAL BRIEF UNDER 37 CFR 41.67

Pursuant to 37 CFR 41.67, this brief is filed in support of the appeal in this application.

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(1) ***Real Party in Interest***

Application 10/642,868 which is the subject of this Appeal, has not been assigned. Ownership remains with the inventor, Vinh Thanh Vu.

(2) ***Related Appeals and Interferences***

There are no other appeals or interferences that will directly affect, be directly affected by or otherwise have a bearing on the Board's decision in this Appeal.

(3) ***Status of the Claims***

Application 10/642,868 was filed with 32 claims.

On Mar. 14, 2006: claims 1, 3-7, 9-10, 15-16, 20-21, 23, and 26-26 were amended and claims 24-25 were canceled.

On Oct. 5, 2006: claims 1, 4-5, 9-10, 15, 21, and 23 were amended.

On Mar. 5, 2007: claims 1, 6, and 26 were amended and claim 23 was canceled.

Claims 1-22 and 26-32 are pending and stand rejected. All pending claims are being appealed.

(4) ***Status of Amendments***

No amendments have been filed since the close of prosecution.

(5) *Summary of the Claimed Subject Matter*

The claimed subject matter on appeal pertains to a vibration-control platform. The platform is primarily intended for use with audio and video components, such as cd players, amplifiers, and the like.

Vibrations interfere with the ability of audio and video components to faithfully reproduce a recorded audio or video signal. Therefore, isolating audio or video components from vibration, and dissipating any vibration that these components generate, improves the performance (*i.e.*, sound and image quality) of audio and video systems.

The benefits of vibration control for audio equipment have been known for some time. Although certainly a niche market, various companies specialize in vibration-control products for audio and video systems. *See*, for example, www.silentrunningaudio.com/sra_products.htm, www.townshendaudio.net/index.php?option=com content&task=view&id=40&Itemid=99, www.grandprixaudio.com/idx_products.php, www.starsoundtechnologies.com/livevibe.html, www.criticalmasssystems.com/HOME%20PAGE.htm, www.brightstaraudio.com/vibration_control_products.htm, www.polycrystal.com/pc-mainframe.htm, to name just a few.

The claimed invention, which, in fact, has been sold by Gingko Audio under the mark "Cloud 10™" (www.gingkoaudio.com/cloud10.html) for several years, was developed to address shortcomings of vibration-control products sold by other companies, such as those mentioned above.

In some embodiments, the claimed resonance/vibration-control platform includes a bottom plate (102) having three or more "wells" or "dimples" (106) arranged in a two-dimensional array. Each well receives a vibration-control element (112), typically a resilient ball, like a "racquet ball." An audio or video component, such as a cd player or an amplifier, *etc.*, is positioned on the balls, or on a top plate (108) that rests on the balls. (*See*, *e.g.*, FIG. 1B.)

Although quite simple in construction, the claimed vibration control platform has proven to be exceedingly effective at accomplishing its intended purpose. *See*, for example, equipment test reviews by professional audio component reviewers at:

www.6moons.com/audioreviews/gingko/cloud10.html, www.positive-feedback.com/Issue13/gingkoaudio.htm, www.stereophile.com/artdudleylistening/1204listening/index.html. About two thousand vibration-control platforms that are identical with the platform described, and that incorporate the claimed invention, have been sold since 2004.

With regard to the independent claims on appeal, claim 1 recites an article for use with spherical vibration-control elements, wherein said article comprises:

> a plate having a number, *n*, of spaced wells arranged in a two-dimensional array, wherein:
> (i) said two-dimensional array comprises at least two rows of said spaced wells with a minimum of three wells in each row;
> (ii) said wells are suitably sized so that when a well receives said spherical vibration control element, said vibration control element contacts said plate at substantially every point along a perimeter of said well; and
> (iii) said wells underlie said spherical vibration control elements, and further wherein, in use, the only constraint to unrestricted lateral movement of said spherical vibration control elements are said wells.

Regarding the limitations recited in independent claim 1, see: plate (102), two-dimensional array of spaced wells (106), and vibration control element (112), which are depicted, for example, in FIGs. 4, 5, and 6. *See*, also, description at [0045]-[0048] and [0056].

Claim 15 recites an article comprising:

> a plate, wherein said plate comprises a first plurality of spaced wells arranged in a two-dimensional array; and
> a second plurality of vibration-control elements, wherein said vibration-control elements are received by some but not all of said wells, one vibration-control element to a well.

Regarding the limitations recited in independent claim 15, see: plate (102), two-dimensional array of spaced wells (106), and vibration control element (112), which are depicted, for example, in FIGs. 4, 5, and 6. *See*, the description at [0045]-[0048] and [0056], and original claim 11.

Claim 21 recites an article comprising:

> a bottom plate, wherein said bottom plate comprises a plurality of spaced wells arranged in a two-dimensional array;
>
> a plurality of resilient balls, wherein said resilient balls are received by some but not all of said wells; and
>
> a top plate, wherein said top plate is disposed on said resilient balls, and wherein a surface of said top plate that abuts said resilient balls is planar and does not include wells.

Regarding the limitations recited in independent claim 21, see: bottom plate (102), two-dimensional array of wells (106), top plate (108), and vibration control element (112), as depicted, for example, in FIGs. 1A, 3A. *See*, the description at [0035] and [0039].

Claim 26 recites an article comprising:

> providing a bottom plate;
>
> forming a number, *n*, of wells in said bottom plate, wherein said wells are arranged in a two-dimensional array, and wherein said two-dimensional array has at least two rows of said wells, and further wherein each said rows comprises at least three wells; and
>
> providing a number, *m*, of vibration-control elements, wherein *m* is less than *n*.

Regarding the limitations recited in independent claim 26, see: bottom plate (102), wells (106), and vibration control element (112), as depicted in FIGs. 4, 5, and 6. *See*, the description at [0035]-[0037] and original claim 11.

(6) ***Grounds of Rejection to be Reviewed on Appeal***

The grounds of rejection to be reviewed are as follows:

(1) Whether claims 1-3, 5, and 7-14 were properly rejected under 35 USC §103 as being obvious over U.S. Pat. No. 6,230,460 to Huyett in view of U.S. Pat. No. 5,330,165 to van Goubergen.

(2) Whether claims 4 and 6 were properly rejected under 35 USC §103 as being obvious over Huyett in view of van Goubergen and further in view of U.S. Pat. No. 3,679,159 to Bach *et al.*

(3) Whether claims 15-20 and 26-32 were properly rejected under 35 USC §103 as being obvious over van Goubergen.

(4) Whether claims 21 and 22 were properly rejected under 35 USC §103 as being obvious over Bach *et al.* in view of van Goubergen.

(7) *Argument*

7.1 Claims 1-3, 5, and 7-14 were Improperly Rejected under 35 USC §103 as being obvious over Huyett in view of van Goubergen

For brevity, the phrase "spherical vibration control element" will be referred to as "SVCE," unless it appears in a claim or in a quotation.

The Examiner alleges that pending claims 1-3, 5, and 7-14 are unpatentable over the combination of Huyett and van Goubergen. It is appellant's contention that these claims are allowable because the combination of these references does not disclose what is recited in the pending claims and/or the combination is inappropriate.

Claim 1 on appeal recites:

> An article for use with spherical vibration-control elements, wherein said article comprises:
>
> a plate having a number, *n*, of spaced wells arranged in a two-dimensional array, wherein:
>
> (i) said two-dimensional array comprises at least two rows of said spaced wells with a minimum of three wells in each row;
>
> (ii) said wells are suitably sized so that when a well receives said spherical vibration control element, said vibration control element contacts said plate at substantially every point along a perimeter of said well; and
>
> (iii) said wells underlie said spherical vibration control elements, and further wherein, in use, the only constraint to unrestricted lateral movement of said spherical vibration control elements are said wells.

Huyett discloses a resilient flooring system. According to Huyett, the flooring system comprises a plurality of laterally spaced "shock absorbers (16)." Each shock absorber (16) includes an elongated sole plate (20) and an elongated top plate (22) having a plurality of spaced-apart sockets (26) and (28), respectively. The sockets receive a rubber sphere (24), such as a neoprene ball, *etc.* The sockets are arranged in a one-dimensional array in the sole plate and the top plate. *See, e.g.*, FIG. 1 of Huyett, reproduced below.

Huyett does not disclose what is recited in claim 1. Namely, Huyett does not disclose that the sockets (*i.e.*, wells) are "*arranged in a two-dimensional array*." The Examiner

recognizes this, but asserts that van Goubergen does disclose SVCEs in a two-dimensional array.

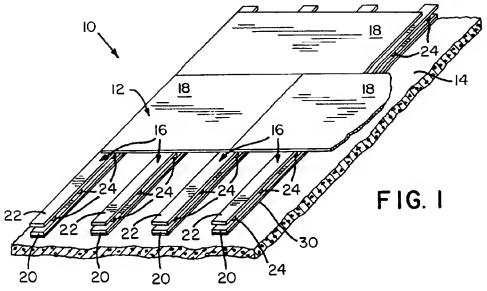


FIG. 1

Huyett – FIG. 1

van Goubergen discloses a vibration damper, such as may be used under the feet of factory equipment, to dampen vibration. According to van Goubergen, the damper comprises a layer (1) of elastomeric bodies that are sandwiched between elastomeric plates (2). The elastomeric bodies can be spherical or a variety of other shapes. To form layer (1), adjacent elastomeric bodies are connected to one another by thin bands (6) of material. Each elastomeric body is received in recesses (4) in plates (2). *See, e.g.*, FIG. 1 of van Goubergen, reproduced below.

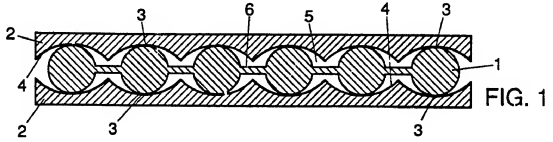


FIG. 1

Van Goubergen – FIG. 1

The Examiner alleges that it would have been obvious to modify Huyett by van Goubergen because "the two-dimensional array [of van Goubergen] would help distribute the load applied to the system through the whole contact surface." According to the Examiner, this would provide for "economical savings in manufacturing and/or production because materials and/or dimensions of the materials could be change[d] based on the ability to resist a particular load amount."

Consider the Examiner's contention in view of Huyett's disclosure.

Some of the stated objectives for Huyett's resilient flooring system are that "it can be easily broken down into its component parts, moved, and reassembled at a new site" and that it should be "lightweight in construction" and "inexpensive to manufacture." *See*, col. 1, lines 47-66.

To that end, Huyett discloses that the "shock absorbers (16)" should comprises sole plates and top plates that are about 8 feet long and 4 inches wide. Each shock absorber (16) is laterally spaced from its neighbor by 16 or 24 inches, in the manner of joists spaced beneath a floor. *See, e.g.*, FIG. 1. It would indeed be a simple matter to manufacture the various parts of these shock absorbers, transport them to the construction site, and then assemble them.

But the Examiner asserts that morphing Huyett into a two-dimensional array of SVCEs "would help distribute the load applied to the system through *the whole contact surface*." (Emphasis added.) According to the Examiner's approach, there would be a single shock absorber having a sole plate and top plate that is substantially equal in size to the floor that is being supported.

Since Huyett's invention is intended to provide resilient support for dance floors, computer labs, hospital operating rooms, gymnasiums, and the like, the Examiner's proposed modification would make for a very large shock absorber (or quite a few smaller ones)!

It seems rather far-fetched to suggest that the proposed modification of Huyett by van Goubergen would result in "economical savings ... because ... dimensions of the materials could be change[d]" as asserted by the Examiner.

In fact, the proposed modification achieves the opposite result. Huyett's inexpensive, lightweight, easily assembled and disassembled flooring system would be morphed, by the Examiner, into something that would:

- be substantially more expensive to manufacture, ship, and install;
- be substantially more cumbersome to install or disassemble due to size and weight issues; and
- have far less utility, since the shocker absorber would be essentially custom designed for each application.

Appellant points out that if there were a need to provide further support for a floor, one could simply provide more rows of Huyett's shock absorbers (16) and situate them closer to one another.

The Federal Circuit has stated that "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441F. 3d 977, 988 (Fed Cir 2006). The Supreme Court approved of this approach in its recent decision in *KSR Int'l Co. v. Teleflex Inc*, 82 U.S.P.Q.2d 1385 (2007).

The Examiner has provided "articulated reasoning" but the "rational underpinning to support the legal conclusion of obviousness" is lacking. As a consequence, appellant urges the Board to reverse the Examiner's rejection of claim 1.

Appellant will separately argue below for the patentability of claims 10, and 11; claims 2, 3, 5, 7-9, and 12-14 will stand or fall with claim 1.

Claim 10 on appeal recites, in pertinent part:

> when said vibration-control elements are disposed in said wells, they do not abut a bottom of said wells.

Claim 10 additionally incorporates the limitations of claim 1, including that:

> (ii) said wells are suitably sized so that when a well receives said spherical vibration control element, said vibration control element contacts said plate at substantially every point along a perimeter of said well; and
> (iii) said wells underlie said spherical vibration control elements, and further wherein, in use, the only constraint to unrestricted lateral movement of said spherical vibration control elements are said wells.

(Emphasis added.)

It will be useful to provide an explanation for the subject matter being claimed here.

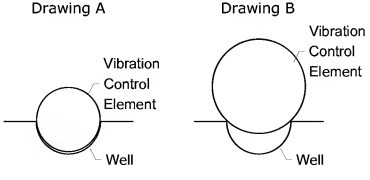
Appellant disclosed that the size of wells (106) is primarily dependent upon the size of SVCE (112). As stated at para. [0046]:

> If wells **106** are too large (*i.e.*, deep), the balls will be deeply recessed. As a consequence, the freedom of the balls to move in response to vibrations might be overly constrained. If the wells **106** are too small, overlying top plate **108** might be unstable.

There are actually two problems that occur when a well is too large. One problem occurs when a well is so oversized relative to the SVCE that the SVCE is free to roll around in a well. This is unacceptable because such unrestrained motion of the SVCE would render the top plate unstable. This situation, in fact, would occur in most of the embodiments shown in van Goubergen if it were not for the fact that thin strips of material (6) attach each elastomeric body (1) to its neighbors.

A second potential problem with a well that is too large is that the SVCE can become overly constrained. What is being referred to here is the case in which the SVCE is just slightly larger than the well such that the SVCE fits deeply in the well. In such a case, movement of the SVCE (as is desired and necessary in conjunction with its vibration control function) is overly restricted by the surface of the well. See drawing "A" below.

In a case in which the well is too small, only a very small portion of the SVCE protrudes into the well, such that the SVCE could be easily displaced from the well. This would cause the overlying platform to be unstable. See drawing "B" below.



For appellant's claimed invention, the desired situation is between these extremes as described in appellant's specification.

Regarding item (iii), any restriction on the lateral movement of SVCEs, beside that imposed by the wells, would impair the performance of the platform in terms of its ability to dissipate vibration from components and isolate those components from vibrations.

The Examiner simply selects the features he needs from van Goubergen and Huyett without regard to the propriety of making the combination. In particular, the Examiner combines these references to show that:

(a) the SVCE contacts substantially every point along the perimeter of the well; and
(b) the only constraint to unrestricted lateral motion of the SVCE is the wells; and
(c) the SVCE does not abut a bottom of the wells.

As discussed further below, because the vibration control approaches taken by van Goubergen and Huyett are incompatible with one another, it is inappropriate to "combine" them.

Huyett does not disclose or suggest limitation "(c)." In particular, the SVCEs (24) and the sockets (26) and (28) are disclosed as having the same radius of curvature "for a snug fit." (Col. 2, lines 63-65.) The Figures all show this snug fit between the SVCEs and the sockets with full contact to the bottom of the wells.

van Goubergen does not disclose limitations "(a)" or "(b)." With regard to limitation "(a)," in van Goubergen, the preferred contact between the SVCE and adjacent covers (2) is "point contact." That is, in embodiments in which an SVCE is sandwiched between two covers, the contact preferably occurs at two points —one at the bottom of the SVCE and one at the top. *See,* for example, FIG. 1 of van Goubergen.

van Goubergen repeatedly emphasizes the benefit of "point" contact between the SVCEs and the overlying and underlying covers (2). In fact, according to van Goubergen, this "point contact" is the basis for his invention:

> This invention is based on the insight that the energy absorbing capacity of an elastomeric body can be increased by reducing the contact of the elastomeric body with other objects to a minimum. (Col. 2, lines 38-42.)

Van Goubergen continues, at col. 2, lines 43-50:

> Because the facing sides of the layer or layers of elastomeric bodies and of the elastomeric plate elements are geared to one another in such a way that the contact between them is limited to point-shaped or at most line-shaped

> places of contact and for the rest the elastomeric bodies are substantially freely deformable, maximum use is made of the resiliently deforming capacity of an elastomer for absorbing vibratory energy.

See, also col. 5, lines 18-23 and col. 6, lines 26-29.

In summary, Huyett and van Goubergen teach conflicting approaches: Huyett teaches a "snug fit" and van Goubergen favors "point contact." It does not seem appropriate to combine references when they conflict with one another, particularly when a point of conflict pertains to the claim limitations at issue.

With regard to limitation "(b)," in Huyett, the movement of the SVCEs are restricted by the wells; in van Goubergen, lateral movement of the SVCEs is primarily restricted by the presence of the strips of material (6), not by the wells.

First, consider van Goubergen's claim language. Claim 1 (lines 6-8 of the claim) recites that "discrete elastomeric bodies [are] interconnected to each other to prevent rolling of said bodies." And claim 12 (lines 24-29 of the claim 12) of van Goubergen recites "discrete elastomeric bodies being ... interconnected to each other to prevent rolling of said bodies whereby lateral movement of said bodies *with respect to each other* is eliminated."

van Goubergen further discloses, at col. 5, lines 30-33, that:

> The recesses **4** here also provide for the limitation of the relative lateral movements of the *covers* **1**, thus preventing lateral slipping of the interposed elastomeric bodies **1**.

See FIG. 1. It is apparent that the wrong "call-out" (*i.e.*, "1") was used in conjunction with the term "covers" in van Goubergen's specification. The reference should have been to "covers **2**." It seems clear in view of the latter clause of the sentence that the call-out "**1**," rather than the descriptor "cover," was in error in the former clause.

What van Goubergen is describing in this passage is that, in the embodiment depicted in FIG. 1, the wells or "recesses" (4) help to limit the extent to which the covers (2) are able to move laterally over the tops of the SVCEs. And, by providing that function, they likewise prevent the interposed *sheet* of interconnected SVCEs from laterally slipping from a desired position between the covers (2).

Van Goubergen is not suggesting that the recesses could or should be used *instead* of the thin bands or strips of material (6) that interconnect the SVCEs. It is clear from FIG. 1 that, even with recesses (4) on the facing surfaces of covers (2), if the SVCEs were not connected to one another, they could move left or right relative to each other within the recesses. And, of course, if the SVCEs were not interconnected, assembly of the damper would be very inefficient.

Rather, what van Goubergen is teaching here is that, given a sheet of interconnected elastomeric bodies (1), the presence of the recesses (4) on the covers (2) limits lateral movement of the covers. Van Goubergen's language does not suggest that the elastomeric bodies (1) could or should be separated, such that "the only constraint to unrestricted lateral movement of said spherical vibration control elements are said wells," as required by limitation "(b)."

It is also noted that even if the thin strips (6) of material were not *intended* to limit lateral motion of the SVCEs (which they clearly are), they most definitely DO limit lateral movement. Appellant's claim language explicitly requires that "the only constraint to unrestricted lateral movement" of the SVCEs is the wells.

In view of the differences approaches that Huyett and van Goubergen adopt, it is not appropriate to simply select features from Huyett and combine them with Goubergen or vice versa to support the rejection of claim 10.

As a consequence, appellant urges the Board to reverse the Examiner's rejection of claim 10.

Claim 11 on appeal recites:

> The article of claim 9 wherein there are fewer of said vibration-control elements than said *n* wells.

The ability to selectively place the SVCEs in some but not all of the wells is very important in appellant's invention because the SVCEs have a preferred weight-carrying capacity (about 10 pounds per SVCE). So even though there might be fifteen wells in the bottom plate, the audio component being supported may weigh fifty pounds such that only five SVCEs should ideally be used, one SVCE to a well.

Also, selective placement of SVCEs is important because most audio components have an uneven weight distribution (most weight is usually concentrated near transformers or power supplies). As a consequence, it is far preferable to have a relatively greater number of SVCEs positioned under relatively heavier regions of the component. This is not possible if the SVCEs are attached to one another, which would force a symmetric and regular distribution of SVCEs.

Neither Huyett nor van Goubergen provides any disclosure or suggestion to place SVCEs (or resilient balls) in some wells, but not all of the wells, in a plate having wells for receiving SVCEs.

The Examiner considers that "it would have been a matter of design choice to employ a desired amount of wells and/or vibration-control elements." Perhaps, but only *after* such a vibration control system is invented. There are very few, if any, vibration control products for audio that can be tailored, on the fly, for a specific weight and a specific weight distribution of audio component that is being supported. In discussing the prior art in the "Background" section of its disclosure, appellant disclosed that:

> These various systems have drawbacks. For example, the technology and materials used in some of these systems are expensive, pushing the retail cost of some of these systems upwards of $1000.... For some systems, the customer provides information about the weight, weight distribution, and size of a component of interest and then the resonance/vibration-control system is designed based on these parameters. This limits the suitability of the platform for other equipment should the purchaser decide to replace the component for which the platform was designed. Some systems, such as magnetic levitation platforms, are particularly sensitive to uneven loads....
>
> Many of the current resonance/vibration-platforms offer little flexibility to adapt to changes in the playback system. And no one resonance/vibration-control system is best for all components (*e.g.*, one manufacturer's turntable vs. another's, *etc.*) in all situations (*e.g.*, room construction, *etc.*). This is problematic because many audiophiles change their playback systems on a regular basis (at least compared to the music-listening public at large). Consequently, an "upgrade" in a source component might <u>downgrade</u> a playback system's ability to reproduce a recorded musical signal because a previous choice in a vibration-control platform is not suited to the new source component.

(Para. [0015]-[0016].)

As disclosed at para. [0020] of the disclosure, Appellant's claimed platform is the solution to this problem:

> The vibration-control platform is structured so that the vibration-control elements can be readily removed from the wells and replaced with different vibration-control elements. For example, in some embodiments, the vibration-control elements are resilient balls. The balls can be easily placed in the wells or removed from them. Consequently, a user can readily change the vibration-isolating characteristics of the platform. This provides the ability, for example, to adapt to a changing audio system, *etc.*

Appellant therefore urges the Board to reverse the Examiner's rejection of claim 11.

7.2 Claims 4 and 6 were Improperly Rejected under 35 USC §103 as being obvious over Huyett and van Goubergen in view of Bach *et al.*

Bach *et al.* is cited because it discloses a skirt (16), as recited in claims 4 and 6. As previously discussed, claim 1 is allowable over the combination of Huyett and van Goubergen. Bach *et al.* does not provide any disclosure that, in combination with Huyett and van Goubergen, would obviate claim 1. As a consequence, claims 4 and 6 are allowable based on their dependence on claim 1.

Appellant therefore urges the Board to reverse the Examiner's rejection of claims 4 and 6.

7.3 Claims 15-20 and 26-32 were Improperly Rejected under van Goubergen

Claim 15 recites an article comprising:

> a plate, wherein said plate comprises a first plurality of spaced wells arranged in a two-dimensional array; and
>
> a second plurality of vibration-control elements, *wherein said vibration-control elements are received by some but not all of said wells*, one vibration-control element to a well.

Regarding claims 15 and 26, The Examiner alleges that van Goubergen teaches an article comprising a plate, wherein the plate comprises a first plurality of spaced wells arranged in a two-dimensional array, and a second plurality of vibration control elements, wherein the vibration control elements are received by the wells, one vibration control element to a well. The Examiner notes that van Goubergen fails to disclose that the SVCE are received by

some but not all of the wells.

But the Examiner considers that it would have been an obvious matter of design choice to employ a desired amount of wells and/or vibration control elements "because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art" citing *In re Aller*. Also, the Examiner notes that "it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art" citing *In re Karlson*.

Claim 26 recites a method comprising:

> providing a bottom plate;
> *forming a number, n, of wells in said bottom plate*, wherein said wells are arranged in a two-dimensional array, and wherein said two-dimensional array has at least two rows of said wells, and further wherein each said rows comprises at least three wells; and
> *providing a number, m, of vibration-control elements, wherein m is less than n.*

The citations are not relevant to the claims under consideration. In the Aller case, the claimed process, which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70%, was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%. The take away from *In re Aller* is that differences in concentration or temperature will not generally support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical.

In all eleven embodiments of his invention (FIGs. 1, 2-10, and 12) van Goubergen shows the elastomeric bodies attached to one another via a webbing that creates an interconnected layer of bodies. It is disclosed that "to facilitate handling the elastomeric bodies they may be interconnected to form a mat by means of a thin layer of material or thin strips." (Col. 2, lines 29-33.) There is no suggestion in van Goubergen to form a vibration damper with fewer elastomeric bodies than available wells. Furthermore, once such a layer of interconnected elastomeric bodies is produced, there is no ability to remove an elastomeric body from the layer.

It is believed, therefore, that claims 15 and 26 are allowable over van Goubergen and appellant urges the Board to reverse the Examiner's rejection thereof. Claims 16-20, which are dependent on claim 15, and claims 27- 32, which are dependent on claim 26, will stand or fall with their respective base claims.

7.4 Claims 21 and 22 were Improperly Rejected under 35 USC §103 as being obvious over Bach *et al*. and van Goubergen

Claim 21 recites an article comprising:

> a bottom plate, wherein said bottom plate comprises a plurality of spaced wells arranged in a two-dimensional array;
> a plurality of resilient balls, *wherein said resilient balls are received by some but not all of said wells*; and
> a top plate, wherein said top plate is disposed on said resilient balls, and wherein a surface of said top plate that abuts said resilient balls is planar and does not include wells.

The combination of van Gouberen and Bach *et al*. does not suggest what is recited in independent claim 21. Namely, neither of these references provide any suggestion, nor would one skilled in the art otherwise be motivated, to place SVCEs (or resilient balls) in some wells, but not all of the wells, in a plate having wells for receiving SVCEs.

As already discussed above, van Goubergen does not teach or suggest having SVCEs in some but not all of the wells. Likewise, there is no such teaching or suggestion of this in Bach *et al*.

Bach *et al*. discloses a vibration isolation structure that is intended to provide vibration isolation for industrial equipment, such as a punch press, or for scientific instruments, such as a microscope.

Bach *et al*. discloses several embodiments of a vibration isolation structure. FIG. 1 depicts four layers of interconnected spherical containers (17) having flexible walls, wherein the containers are disposed in a cavity (14). The cavity is formed by bottom panel (12), four side walls (13), and a top panel (15). Each layer of containers (17) is preferably filled with a fluid having vibration damping characteristics that is different from the damping

characteristics of each other layer. The top panel "floats" on the upper layer of containers (17).

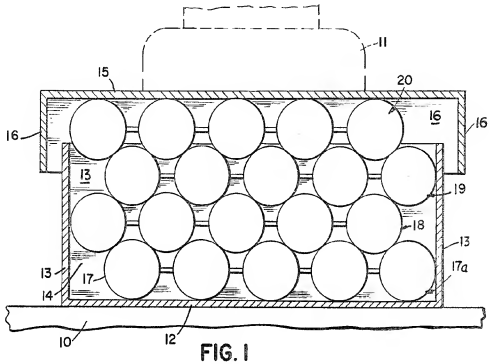


FIG. 1

A second embodiment is depicted in FIGs. 2-4 a thin, flexible sheet of rubber (35) is disposed over panel (30). A grid (36) of metal is placed over the rubber (35). Pressurized air is then introduced between the rubber sheet (35) and panel (30), creating "bubbles" (37). (*See*, Figs. 3 and 4.)

FIGs. 7 and 8 depict additional embodiments of the Bach *et al.* vibration isolation structure. For the embodiment that is depicted in FIG. 7, a top plate (not shown) and a bottom plate (60) are separated by a single, fluid-filled, flexible walled tube (62). The tube is in the form of a square, and serves as a vibration isolation element for the overlying top plate.

The embodiment that is depicted in FIG. 8 is similar to that depicted in FIG. 7, the difference being that the tube (66) is in the form of an Archimedes spiral.

Bach *et al.* notes modifications wherein the fluid-filled containers (17) are not connected and the top and bottom plates have curved cavities "within each of which a portion ... of the bubble fits." (Col. 4, lines 30-35.)

There is nothing in Bach *et al*. that discloses, suggests, or would otherwise motivate one skilled in the art to provide a vibration-control platform wherein "vibration-control elements (or resilient balls) are received by some but not all of said wells" as required by claim 21 on appeal.

It is believed that the foregoing demonstrates that the Examiner has not made a prima facie case for the rejection of independent claim 21 under 35 USC §103 over van Goubergen and Bach *et al*. As a consequence, the Board is urged to direct the Examiner to withdraw the rejection of claim 21, and claim 22 dependent thereon.

(8) ***Conclusion***

The appellant has demonstrated that the logic underlying the Office's rejection is untenable, and, therefore, that the rejection is not sustainable. For this reason, the appellant respectfully requests the Board of Appeals to reverse the decision of the Examiner as provided for in 37 C.F.R. 41.50(a).

Respectfully,
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9. *Claims Appendix*

1. (Previously Presented) An article for use with spherical vibration-control elements, wherein said article comprises:

a plate having a number, *n*, of spaced wells arranged in a two-dimensional array, wherein:

(i) said two-dimensional array comprises at least two rows of said spaced wells with a minimum of three wells in each row;

(ii) said wells are suitably sized so that when a well receives said spherical vibration control element, said vibration control element contacts said plate at substantially every point along a perimeter of said well; and

(iii) said wells underlie said spherical vibration control elements, and further wherein, in use, the only constraint to unrestricted lateral movement of said spherical vibration control elements are said wells.

2. (Original) The article of claim 1 wherein said number, *n*, is between 8 and 25, inclusive.

3. (Previously Presented) The article of claim 1 further comprising a top plate, wherein, in use with said vibration-control elements, said top plate is disposed above said plate, proximal to said plurality of wells.

4. (Previously Presented) The article of claim 3 further comprising a skirt, wherein said skirt depends from a marginal region of said top plate, and further wherein said skirt extends toward said plate.

5. (Previously Presented) The article of claim 1 wherein said perimeter is circular and has a diameter in the range of between about ½ inch to about 1¼ inches.

6. (Previously Presented) The article of claim 4 wherein said top plate and said plate have the same shape, and further wherein said top plate is larger than said plate such that said plate fits within an area defined by said skirt.

7. (Previously Presented) The article of claim 1 wherein said plate is acrylic.

8. (Original) The article of claim 3 wherein said top plate is acrylic.

9. (Previously Presented) The article of claim 1 further comprising said vibration-control elements.

10. (Previously Presented) The article of claim 3 wherein, when said vibration-control elements are disposed in said wells, they do not abut a bottom of said wells.

11. (Original) The article of claim 9 wherein there are fewer of said vibration-control elements than said *n* wells.

12. (Original) The article of claim 9 wherein said vibration-control elements are balls.

13. (Original) The article of claim 12 wherein said balls are resilient.

14. (Original) The article of claim 12 wherein said balls are selected from the group consisting of racquet balls, hand balls, paddle balls and squash balls.

15. (Previously Presented) An article comprising:

a plate, wherein said plate comprises a first plurality of spaced wells arranged in a two-dimensional array; and

a second plurality of vibration-control elements, wherein said vibration-control elements are received by some but not all of said wells, one vibration-control element to a well.

16. (Previously Presented) The article of claim 15 further comprising a top plate, wherein said top plate is disposed above said plate and wherein said vibration-control elements are sandwiched between said plate and said top plate.

17. (Original) The article of claim 15 wherein said vibration-control elements are balls.

18. (Original) The article of claim 17 wherein said balls are resilient.

19. (Original) The article of claim 18 wherein said balls are selected from the group consisting of racquet balls, hand balls, paddle balls and squash balls.

20. (Previously Presented) The article of claim 15 wherein said plate comprises acrylic and wherein said vibration-control elements are resilient balls.

21. (Previously Presented) An article comprising:

a bottom plate, wherein said bottom plate comprises a plurality of spaced wells arranged in a two-dimensional array;

a plurality of resilient balls, wherein said resilient balls are received by some but not all of said wells; and

a top plate, wherein said top plate is disposed on said resilient balls, and wherein a surface of said top plate that abuts said resilient balls is planar and does not include wells.

22. (Original) The article of claim 21 wherein said bottom plate comprises acrylic and wherein said top plate comprises acrylic.

23. – 25. (Canceled)

26. (Previously Presented) A method comprising:

providing a bottom plate;

forming a number, *n*, of wells in said bottom plate, wherein said wells are arranged in a two-dimensional array, and wherein said two-dimensional array has at least two rows of said wells, and further wherein each said rows comprises at least three wells; and

providing a number, *m*, of vibration-control elements, wherein *m* is less than *n*.

27. (Previously Presented) The method of claim 26 further comprising disposing a top plate on said vibration-control elements.

28. (Original) The method of claim 26 wherein disposing said plurality of vibration-control elements further comprises selecting a property of said plurality of vibration-control elements as a function of a property of an audio component or video component that is to be supported by said vibration control elements.

29. **(Original)** The method of claim 28 wherein said property of said vibration-control elements is its relative degree of resilience.

30. (Original) The method of claim 28 wherein said property of said vibration-control elements is its capacity to support weight.

31. (Original) The method of claim 28 wherein said property of said audio component is selected from the group consisting of the weight of said audio component and type of audio component.

32. **(Original)** The method of claim 24 wherein said vibration-control elements are balls.

10. ***Evidence Appendix***

No evidence submitted pursuant to 37 CFR §§1.130, 1.131, or 1.132.

11. *Related Proceedings Appendix*

There are no related proceedings.